

REMARKS

Claims 18-32 were pending in the application. Claims 28-32 have been withdrawn. Claims 18 and 23 have been amended. No claims have been added. Claims 28-32 have been cancelled without prejudice or disclaimer. Therefore, claims 18-27 remain pending and are submitted for consideration.

Restriction

Applicants appreciate the acknowledgement of elected claims 18-27. Withdrawn claims 28-32 have been cancelled, without prejudice or disclaimer.

Priority

With regard to the priority of the present application, Applicants have already submitted a claim for priority to Japanese Application No. JP 2003-132899, and the Patent Office has already recognized the priority by notification of such in the filing receipt. Additionally, Applicants previously submitted an Applicant Disclosure Statement (ADS) that included a specific reference to the priority application. Thus, Applicants respectfully submit that no further action is required.

Rejections under 35 U.S.C. § 112

Claims 18-27 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Claims 18-27 are also rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. The Examiner contends that claims 18 and 23 recite fused sentences, thus not enabling one skilled in the art to ascertain what is encompassed by the invention. The rejections should be withdrawn for at least the following reasons.

Independent claim 18 has been amended to recite the following:

wherein the vehicle yawing motion control section initiates the vehicle yawing motion control *when all following conditions occur*:
(1) when the host vehicle is traveling on predetermined road surface irregularities;
(2) while the lane marking detection section cannot recognize or detect the lane marking line; and

(3) an absolute value of the future lateral displacement immediately before the lane marking detection section cannot recognize or detect the lane marking line is greater than or equal to a predetermined lateral displacement criterion.

Independent claim 23 has been amended similarly. Thus, claims 18 and 23 clarify that the vehicle yawing motion control section initiates the vehicle yawing motion control when all following conditions (1), (2), and (3) occur. Furthermore, the original disclosure supports such vehicle yawing motion control. For example, Steps 9, 10, 14, 15, and 16, and paragraphs [0070] to [0072], among other places, support such vehicle yawing motion control. Therefore, the rejections under 35 U.S.C. § 112, first paragraph and second paragraph are improper. Applicants respectfully request reconsideration and withdrawal of the rejection.

Rejection under 35 U.S.C. § 103 – Claims 18, 21, 23, and 26

Claims 18, 21, 23, and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,913,375 (hereinafter “Nishikawa”) in view of U.S. Patent No. 6,185,492 (hereinafter “Kagawa”). The rejection should be withdrawn for at least the following reasons.

Nishikawa and Kagawa, taken together or separately, fail to, teach, or suggest an automotive lane deviation prevention apparatus that comprises (as recited in claim 18 and similarly in claim 23), among other things:

wherein the vehicle yawing motion control section initiates the vehicle yawing motion control *when all following conditions occur*:
(1) when the host vehicle is traveling on predetermined road surface irregularities;
(2) while the lane marking detection section cannot recognize or detect the lane marking line; and
(3) an absolute value of the future lateral displacement immediately before the lane marking detection section cannot recognize or detect the lane marking line is greater than or equal to a predetermined lateral displacement criterion.

Nishikawa discloses a vehicle steering force correction system that includes a camera (10) for detecting the condition of the road. The Examiner states that Nishikawa can detect a

lane marker, but fails to disclose that the lane markers can have irregularities. The Examiner refers to Kagawa for allegedly teaching the use of a camera to detect irregularities, such as grooves (60), in the road. Thus, the Examiner contends that Nishikawa in view of Kagawa teach vehicle yawing motion control being initiated when the host vehicle is traveling on predetermined road surface irregularities.

However, grooves (60) are not actual grooves or irregularities in the road. Everything in Figure 3 of Kagawa is virtual, wherein the virtual sphere (52) (which corresponds to a vehicle) moves on a virtual surface (50) of the road (42). Kagawa states that the “road 42 actually has a flat surface over the entire width.” Kagawa at col. 9, lines 48-49.

Furthermore, neither reference discloses initiating the vehicle yawing motion control when all of the claimed conditions occur. Nishikawa and Kagawa are both silent on yawing motion control section initiating yawing motion control when the lane marking detection section cannot detect the lane marking line, and when the absolute value of the future lateral displacement immediately before the lane marking detection section cannot recognize or detect the lane marking line is greater than or equal to a predetermine lateral displacement criterion. Thus, the rejection under 35 U.S.C. § 103 is improper. Applicants respectfully request reconsideration and withdrawal of the rejection.

Claims 21 and 26 depend from claim 18 or claim 23 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable subject matter set forth in these dependent claims.

Rejection under 35 U.S.C. § 103 – Claims 22 and 27

Claims 22 and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Kagawa, and further in view of U.S. Patent No. 5,638,275 (hereinafter “Sasaki”). Claims 22 and 27 depend from claims 18 and 23, respectively. The rejection should be withdrawn for at least the following reasons.

None of the references, taken together or separately, teach or suggest an automotive lane deviation prevention apparatus that comprises (as recited in claim 18 and similarly in claim 23), among other things:

wherein the vehicle yawing motion control section initiates the vehicle yawing motion control *when all following conditions occur*:
(1) when the host vehicle is traveling on predetermined road surface irregularities;
(2) while the lane marking detection section cannot recognize or detect the lane marking line; and
(3) an absolute value of the future lateral displacement immediately before the lane marking detection section cannot recognize or detect the lane marking line is greater than or equal to a predetermined lateral displacement criterion.

As stated above, Nishikawa in view of Kagawa merely disclose determining yawing control when the host vehicle travels on road surface irregularities. Both Nishikawa and Kagawa fail to disclose initiating yawing motion control when “the lane marking detection section cannot recognize or detect the lane marking line” and when “an absolute value of the future lateral displacement immediately before the lane marking detection section cannot recognize or detect the lane marking line is greater than or equal to a predetermined lateral displacement criterion.”

Sasaki fails to cure the deficiencies of Nishikawa in view of Kagawa. Even assuming arguendo that one of ordinary skill would have been motivated to modify Nishikawa (as modified by Kagawa) with the area except road-ways and inhibiting a check for the host vehicle traveling on predetermined road surface irregularities as allegedly taught by Sasaki, the resulting combination would still fail to teach or suggest an automotive lane deviation prevention apparatus that comprises, among other things:

wherein the vehicle yawing motion control section initiates the vehicle yawing motion control *when all following conditions occur*:
(1) when the host vehicle is traveling on predetermined road surface irregularities;
(2) while the lane marking detection section cannot recognize or detect the lane marking line; and
(3) an absolute value of the future lateral displacement immediately before the lane marking detection section cannot recognize or detect the lane marking line is greater than or equal to a predetermined lateral displacement criterion.

as recited in claim 18 (and similarly in claim 23). The rejection of claims 22 and 27 under 35 U.S.C. § 103(a) is improper. Applicants respectfully request reconsideration and withdrawal of the rejection.

Rejection under 35 U.S.C. § 103 – Claims 19, 20, 24, and 25

Claims 19, 20, 24, and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nishikawa in view of Kagawa, and further in view of U.S. Patent No. 5,604,307 (hereinafter “Lida”). Claims 19-20 depend from claim 18; and claims 24-25 depend from claim 23. The rejection should be withdrawn for at least the following reasons.

None of the references, taken together or separately, teach or suggest an automotive lane deviation prevention apparatus that comprises (as recited in claim 18 and similarly in claim 23), among other things:

wherein the vehicle yawing motion control section initiates the vehicle yawing motion control *when all following conditions occur*:
(1) when the host vehicle is traveling on predetermined road surface irregularities;
(2) while the lane marking detection section cannot recognize or detect the lane marking line; and
(3) an absolute value of the future lateral displacement immediately before the lane marking detection section cannot recognize or detect the lane marking line is greater than or equal to a predetermined lateral displacement criterion.

As stated above, both Nishikawa and Kagawa fail to disclose initiating yawing motion control when “the lane marking detection section cannot recognize or detect the lane marking line” and when “an absolute value of the future lateral displacement immediately before the lane marking detection section cannot recognize or detect the lane marking line is greater than or equal to a predetermined lateral displacement criterion” as recited in claim 18.

Lida fails to cure the deficiencies of Nishikawa in view of Kagawa. Even assuming arguendo that one of ordinary skill would have been motivated to modify Nishikawa (as modified by Kagawa) with the wheel speed sensors as allegedly taught by Lida, the resulting combination would still fail to teach or suggest an automotive lane deviation prevention apparatus that comprises, among other things:

wherein the vehicle yawing motion control section initiates the vehicle yawing motion control *when all following conditions occur*:
(1) when the host vehicle is traveling on predetermined road surface irregularities;
(2) while the lane marking detection section cannot recognize or detect the lane marking line; and
(3) an absolute value of the future lateral displacement immediately before the lane marking detection section cannot recognize or detect the lane marking line is greater than or equal to a predetermined lateral displacement criterion.

as recited in claim 18 (and similarly in claim 23). The rejection of claims 19-20 and 24-25 under 35 U.S.C. § 103(a) is improper. Applicants respectfully request reconsideration and withdrawal of the rejection.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application, as amended, is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date MAR 11 2009

By 

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5426
Facsimile: (202) 672-5399

Glenn Law
Attorney for Applicant
Registration No. 34,371

Jessica M. Cahill
Attorney for Applicant
Registration No. 56,986